ANALOGUE BASED FORECASTING AND FOOD STORE LOCATION

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ABSTRACT:

One of the most important decisions a retailer can make is where to locate a retail outlet. Because convenience is so important to today's consumers, a retail store can prosper or fail solely based on its location. Recently, a changing retail environment is augmenting the location importance as retail economic groups develop multi outlet chains of small stores. Small stores as proximity outlets are especially dependent on location as their attraction power is limited and many sales come from pedestrians.

In this presentation a methodology for the evaluation of alternative locations for new outlets from a recent food chain of small stores is described. The proposed approach defines macro chain expansion regions by analyzing demographic and competition variables in a Geographical Information Systems environment. After that, the potential micro locations in the region (the consideration set coming from real state data bases) are selected using an analogue based forecasting method.

As a first step in the micro location analysis clustering and classification techniques are used to define types of existing outlets. Although a lot of data is available (including results from two inquiries, existing data bases on competition, demography, and a mystery shopping program) there are only a small number of stores, which makes clustering validation very difficult. Thus, several different techniques of external and internal validation with the explicit or implicit use of knowledge of specialists are used in order to validate the obtained clusters.

The small clusters of 3 to 6 outlets defined by the latter method are used as analogue groups for forecasting sales in new locations. New locations are classified in one of the analogue groups and the next year forecasted average sales are used as criterion for location selection. The classification rules are derived from classification trees. Some of the rules are believed to be very general helping to support better location decisions.

PASSWORDS:

Food store location; Analogue based forecasting; Geographical information systems; Clustering; Classification.